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**Amendments to the Claims.**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

The listing of the Claims as pending now in examination is:

1-35 (Canceled)

36. (currently amended) A method for repairing and/or waterproofing and/or insulating and/or reinforcing a wall system by and/or restoring the structural integrity thereof, the of-wall-systems system comprising a solid aggregate structure consisting of blocks of material with a binder interposed therebetween, the solid structure extending between planes of arrangement of opposite surfaces thereof, the method consisting:

--in locating ~~existing~~ cavities that exist and are formed in said solid structure by disaggregation of the block material or binder in a wall system of a building;

-- in providing spaced injection holes within said wall system in a manner suitable to pass through said cavities that exist in the solid structure wall system;

-- in inserting injection tubes in said injection holes;

-- in injecting in said injection holes, through said injection tubes, a substance that expands after injection as a consequence of a chemical reaction, fills said cavities and restores the structural integrity of the solid structure.

37. (previously submitted) The method according to claim 36, wherein during injection said injection tubes are retracted gradually, in the opposite direction with respect to insertion, along the corresponding injection holes in order to allow said substance to penetrate the cavities crossed by, or proximate to, said injection holes.

38. (previously submitted) The method according to claim 36, wherein said

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injection holes are formed substantially at right angles to the largest surface of the cavities inside the wall system.

39. (previously submitted) The method according to claim 36, wherein said substance is constituted by a closed-cell polyurethane foam.

40. (previously submitted) The method according to claim 36, wherein said substance is constituted by an MDI i. e. a methylene diphenyl diisocyanate and a mixture of polyols.

41. (previously submitted) The method according to claim 36, wherein said substance has a maximum expansion pressure substantially comprised between 20 kPa and 200 kPa.

42. (previously submitted) The method according to claim 41, wherein said substance has, during expansion, a reduction in the maximum expansion pressure upon a low increase in volume, i.e. a dissipation after a degree of expansion thereof that may be less than 5% of its initial volume.

43. (currently amended) The method according to claim 36, wherein said substance has a maximum expansion pressure that is lower than a bursting limit pressure of the solid structure of the wall system in which it is injected.

44. (previously submitted) The method according to claim 36, wherein the reaction time of said substance is comprised between 3 and 60 seconds.

45. (previously submitted) The method according to claim 36, wherein the chemical reaction for expansion of said substance and said substance during expansion remain non-altered by water presence.

46. (previously submitted) The method according to claim 36, wherein said substance, once expanded and consolidated, maintains a non-altered state in the presence of water, or water containing acid and/or water rich in sulfates and/or carbonates or salts in general.

47. (previously submitted) The method according to claim 36, wherein said substance, once injected and hardened, has a tensile strength substantially comprised between an average of 180 N/cm<sup>2</sup> at a density of 200 kg/m<sup>3</sup> and 800 N/cm<sup>2</sup> at a density

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of 500 kg/m<sup>3</sup>.

48. (previously submitted) The method according to claim 36, wherein said substance, once injected and hardened, has a compression strength substantially comprised between an average of 200 N/cm<sup>2</sup> at a density of 200 kg/m<sup>3</sup> and 1300 N/cm<sup>2</sup> at a density of 500 kg/m<sup>3</sup>.

49. (previously submitted) The method according to claim 36, wherein said substance, prior to the beginning of the chemical reaction of expansion, has a viscosity substantially comprised between 200 mPa·s and 300 mPa·s at 20 °C.

50. (previously submitted) The method according to claim 49, wherein viscosity of said substance passes from a value of 200-300 mPa·s to a value that tends to infinity in a time interval comprised between 20 and 150 seconds starting from the beginning of the chemical reaction of expansion of said substance.

51. (previously submitted) The method according to claim 45, wherein said substance, once injected and hardened, has a lower relative density than water.

52. (previously submitted) The method according to claim 36, wherein said injection holes are produced along substantially vertical directions, and in that said substance is injected through said injection tubes by gradually retracting said injection tubes upward.

53. (previously submitted) The method according to claim 36, wherein said injection holes are produced along directions that are inclined with respect to the vertical and in that the injection through said injection tubes is performed while gradually retracting said injection tubes upward.

54. (currently amended) The method according to claim 36, wherein said injection holes are provided along a direction with a longitudinal extension that is contained between the planes of arrangement of two opposite faces of the wall system.

55. (previously submitted) The method according to claim 36, wherein the distance between two contiguous injection holes is substantially comprised between 0.20 m and 2.00 m.

56. (previously submitted) The method according to claim 36, wherein a

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diameter of said injection holes is substantially comprised between 4 mm and 40 mm.

57. (previously submitted) The method according to claim 36, wherein said injection tubes have an inlet that is connected to an injection device and multiple outlets for passage of said substance.

58. (previously submitted) The method according to claim 57, wherein the overall passage section of said outlets of said injection tubes is greater than the passage section of said inlet.

59. (previously submitted) The method according to claim 37, wherein said injection tubes are constituted by, or treated with, lubricating material in order to facilitate retraction thereof during injection of said substance.

60. (previously submitted) The method according to claim 37, comprising during the injection of said substance, adjusting a rate of retraction of the injection tubes according to a pressure and/or flow-rate of injection of said substance.

61. (currently amended) The method according to claim 36, comprising ~~providing~~ providing means for interrupting the injection of said substance.

62. (previously submitted) The method according to claim 60, wherein the injection pressure is measured by way of a pressure gauge that is arranged upstream of the inlet of said injection tubes and is connected to the feeding tube for injection of said substance.

63. (previously submitted) The method according to claim 60, wherein the injection flow-rate is measured by means of a flow-rate measurement device that is arranged upstream of the inlet of said injection tubes and is connected to the tube for feeding the injection of said substance.

64. (currently amended) The method according to claim 60, comprising detecting presence of said substance and the pressure applied thereby during expansion at regions of the solid structure of the wall system that are proximate to regions affected by the injection.

65. (currently amended) The method according to claim 64, comprising measuring the presence of said substance and the pressure applied thereby during

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expansion, in the regions of the solid structure of the wall system that are proximate to the regions affected by the injection, by way of piezometer pipes inserted in measurement holes provided in the wall system at preset distances from the injection holes in which said injection tubes are inserted.

66. (currently amended) The method according to claim 36, comprising constantly monitoring during the injection of said substance the movement of the solid structure of the wall system along directions that are substantially perpendicular to the planes of arrangement of two larger faces of the solid structure of the wall system.

67. (currently amended) The method according to claim 66, comprising following by way of a monitoring device with laser levels the movement of the solid structure of the wall system along directions that are substantially perpendicular to the planes of arrangement of the two larger faces of the solid structure of the wall system.

68. (currently amended) The method according to claim 36, comprising preliminary interventions to limit escape of said substance from outlets of said cavities that lead out of the solid structure of the wall system.

69. (previously submitted) The method according to claim 68, wherein said preliminary interventions consist in performing column-type injections of a substance that expands by chemical reaction in the soil directly in the interface between the soil and the wall system and/or in regions of the ground that are spaced from the wall system.

70. (currently amended) The method according to claim 68, wherein said preliminary interventions consist in applying a sheet of geotextile fabric to the surface of the solid structure of the wall system where said outlets of the cavities are present and in performing a spray covering of said fabric with a substance that expands by chemical reaction.

71. (canceled)

72. (canceled)

73. (new) A method for repairing, waterproofing, insulating and reinforcing a wall

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system by restoring structural integrity thereof, the wall system comprising a solid aggregate structure consisting of blocks of material with a binder interposed therebetween, the solid structure extending between planes of arrangement of opposite surfaces thereof, the method consisting:

- in locating existing cavities formed in said solid structure by disaggregation of the block material or binder;
- in providing spaced injection holes that extend along substantially vertical directions within said solid structure of the wall system in a manner suitable to pass through said cavities that exist in the solid structure ;
- in inserting injection tubes in said injection holes;
- in injecting in said injection holes, through said injection tubes which are gradually retracted upward during injection, a substance that expands after injection as a consequence of a chemical reaction, fills said cavities and the injection holes and restores the structural integrity of the solid structure.

74. (new) A method for repairing, waterproofing, insulating and reinforcing a wall system by restoring structural integrity thereof, the wall system comprising a solid aggregate structure consisting of blocks of material with a binder interposed therebetween, the solid structure extending between planes of arrangement of opposite surfaces thereof, the method consisting:

- in locating existing cavities formed in said solid structure by disaggregation of the block material or binder;
- in providing spaced injection holes that extend along substantially vertical directions within said solid structure of the wall system in a manner suitable to pass through said cavities that exist in the solid structure ;
- in selecting an expandable substance suitable to expand as a consequence of a chemical reaction that before expansion has a permeability coefficient equal to  $10^{-9}$  m/s and an average viscosity comprised between 200 and 300 mPa.s at 20° C;
- in inserting injection tubes in said injection holes;

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-- in injecting in said injection holes, through said injection tubes which are gradually retracted upward during injection, a substance that expands after injection as a consequence of a chemical reaction, fills said cavities and the injection holes and restores the structural integrity of the solid structure.